

DEPARTMENT OF COMPUTER SCIENCE

COURSE CURRICULUM & MARKING SCHEME PROGRAM

CODE: DPDC02

PGDCA 1st & 2nd SEMESTER

(Based on CBCS)



D. P. VIPRA COLLEGE,

(AN AUTONOMOUS INSTITUTION)

OLD HIGH COURT ROAD BILASPUR (CHHATTISGARH)

RE-ACCREDITED "A" GRADE BY NAAC Phone No: 07752-424497

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Scheme of Post Graduate Diploma in Computer Application under Semester System

Program Code& Name: DPDC02 - PGDCA

Session 2025-26

Semester	Course Code	Course Name	Credit			Total Credit	Marks			
			L	T	P		ESE	CIA	Total	
									MAX	MIN
First	PGDCAT101	Introduction to Computer Fundamental & Information Technology	3	1	-	4	70	30	100	40
	PGDCAT102	PC Package & Tally	3	1	-	4	70	30	100	40
	PGDCAT103	Programming in C	3	1	-	4	70	30	100	40
	PGDCAP101	Office Automation-Lab	-	-	3	3	35	15	50	20
	PGDCAP102	Programming in C-Lab	-	-	3	3	35	15	50	20
Total						18	280	120	400	160
Second	PGDCAT201	Operating System	3	1	-	4	70	30	100	40
	PGDCAT202	Web Technology	3	1	-	4	70	30	100	40
	PGDCAT203	Relational Database Management Systems (ORACLE)	3	1	-	4	70	30	100	40
	PGDCAP201	Web Technology & RDBMS - Lab	-	-	3	3	70	30	100	40
	PGDCAP202	Major Project	-	-	3	3	70	30	100	40
Total						18	350	150	500	200

Program Code and Name	DPDC02- Post Graduate Diploma in Computer Application			Semester	I
Exam Code and Name	4021 - Post Graduate Diploma in Computer Application First Semester			Paper	I
Course Code	PGDCAT101			Course Type	T
Course Title	INTRODUCTION TO COMPUTER FUNDAMENTAL & INFORMATION TECHNOLOGY				
Total Credit	4				
Total Marks	CIA: 30	ESE: 70	Max Marks: 100	Min. Pass. Marks: 40	
Prerequisites (if any)					
Course Outcomes	CO1: Understand the fundamentals of computers, their types, components, and input/output devices. CO2: Explain various data storage devices and data retrieval methods used in computer systems. CO3: Identify different types of software, operating systems, and programming languages with their functions. CO4: Analyze basic concepts of data communication, networking, and transmission technologies.				

Contents of Course		
Unit	Contents	No. of Period
I	Introduction to Computer and Information Technology: Brief history of development of computer & generations of computer, Computer system characteristics. Capabilities and limitations block diagram of computer. Types of computer-Analogs, Hybrid, digital, micro, mini, mainframe, super computer. Personal computer, types of PCs desktop, laptop, notebook, palmtop etc. INPUT/OUTPUT devices: keyboard, mouse, monitor, trackball, joystick, digitizing table, scanners, digital cameras, MICR, OCR, OMR, Bar-code reader, Voice recognition, light pen, touch screen, devices, printer, plotter.	15
II	Storage device: Data storage and retrieval methods-sequential, direct and index sequential- various storage devices-magnetic tape, magnetic disks, cartridge tape, data drives hard disk drives, floppy disks, optical disks-CD, VCD, CDR, CDRW, DVD.	15
III	Computer software: types of software, system software, application software, operating system, utility program, assemblers, compilers and interpreter. Operating system functions, Types batch, single user, multi user, multiprogramming, multiprocessing, Programming languages, machine, assembly, high level, 4GL, their merits and demerits. Computer virus–types of viruses, virus detection & prevention virus on network.	15
IV	Data Communication & networks: analog and digital signals, modulations. Types of network LAN, WAN, MAN etc, Topologies of LAN ring, bus star, mesh and tree topologies, communication protocols TCP/IP protocols suite. Communication channels media twisted, coaxial fiber optic, serial and parallel communication, Network operating system (NOS), bridges, hub, routers, repeater and gateways. Modem working and characteristics. Types of connections- dialup leased lines, ISDN, broadband.	15
Total no. of Lectures		60

Reference books	1. Computer fundamentals, P.K.Sinha, BPB 2. Computer today by S.K.Basandra Galgotia Publications. 3. Fundamentals of information by Alexos Leon & Mathews Leon, Vikas Publishing House, New Delhi
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Assessment and Evaluation		
Suggested Continuous Evaluation Methods:		
Maximum Marks: 100 Marks	Continuous Internal Assessment (CIA): 30 Marks	End Semester Exam (ESE) : 70 Marks
Continuous Internal Assessment (CIA)	Internal Test/Quiz- (2): 20 & 20 Assignment / Seminar: 10 Total Marks: 30	Better marks out of the two Test / Quiz + obtained marks is Assignment shall be considered against 30 Marks
End Semester Exam (ESE)	Three Section - A, B & C Section A: Q1. Objective- 10 x 1 = 10 Mark; Section B: Long Answer type questions 1 out of 2 from each unit- 4 x 5 = 20 Marks; Section C: Descriptive answer type questions 1 out of 2 from each unit- 4 x 10 = 40 Marks;	

Program Code and Name	DPDC02-Post Graduate Diploma in Computer Application			Semester	I
Exam Code and Name	4021 - Post Graduate Diploma in Computer Application First Semester			Paper	II
Course Code	PGDCAT102			Course Type	T
Course Title	PC PACKAGES & TALLY				
Total Credit	4				
Total Marks	CIA: 30	ESE: 70	Max Marks: 100/	Min. Pass. Marks: 40	
Prerequisites (if any)					
Course Outcomes	CO1: Understand the fundamentals of DOS operations, Windows environment, and basic file management. CO2: Apply word processing techniques using Microsoft Word for document creation and formatting. CO3: Utilize spreadsheet tools in Microsoft Excel for data management, calculations, and graphical representation. CO4: Perform basic accounting tasks using Tally ERP 9 including company creation, voucher entry, and financial report generation.				

Contents of Course		
Unit	Contents	No. of Period
I	Fundamental of DOS & Windows: Fundamental of DOS booting process, internal and external commands, creating and executing batch files and directories creating text files. Introduction to windows features, various versions of windows, origin of windows parts of windows screen types and anatomy of windows using.	15
II	Introduction to word processing (MS-word): Advantages of word processing, editing a file using paragraphs, bullets, indentation, Etc. Formatting features, printing the documents, it includes paper-size, margins, header and footer, page no., using macros. Advance word processing, header and footers. Finding text, mail merge and other application, mathematical calculations, table handing.	15
III	Introduction to spread sheet (MS-Excel): Definition and advantages of electronic worksheet, working of spread sheet, range and related operations. Setting saving and retrieving work sheet file, inserting deleting coping & moving of data cells, inserting and deleting rows & columns, protecting cell printing a worksheet, erasing a worksheet, graphs, creation, types of graphs. Introduction to PowerPoint (MS-PowerPoint): Creating a presentation, inserting/deleting slides, different slide views, editing slides., Slide transition & editing special effects inserting sound, picture, chart, organization chart.	15
IV	Accounting software Tally ERP9: Basic principles of double entry accounting system, creating new company security controls, groups, ledger, voucher type, modifying, new company, voucher entry, generating profit & loss account, trial balance and balance sheet, backup & restore.	15
Total no. of Lectures		60

Reference books	<ol style="list-style-type: none"> 1. Comdex Computer Course Kit (Windows 7 withoffice2010), Gupta vikas, Dreamtech Publication. 2. Mastering MS-Office 2000, Professional Edition by Courter,BPB Publication. 3. MS-Office 2000 Training Guide by Maria, BPB Publication. 4. PC Software, Ravi Taxalli, BPB 5. Computer Fundamental by P.K. Sinha 6. Financial Accounting with Tally 9.001edition by Vikas Gupta. 7. Mastering Tally... ERP9 By A.K. Nandhani.
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End Semester Exam (ESE)	Three Section - A, B & C Section A: Q1. Objective- 10 x 1 = 10 Mark; Section B: Long Answer type questions 1 out of 2 from each unit- 4 x 5 = 20 Marks; Section C: Descriptive answer type questions 1 out of 2 from each unit- 4 x 10 = 40 Marks;	

Program Code and Name	DPDC02-Post Graduate Diploma in Computer Application			Semester	I
Exam Code and Name	4021 - Post Graduate Diploma in Computer Application First Semester			Paper	III
Course Code	PGDCAT103			Course Type	T
Course Title	PROGRAMMING IN C				
Total Credit	4				
Total Marks	CIA: 30	ESE: 70	Max Marks: 100	Min. Pass. Marks: 40	
Prerequisites (if any)					
Course Outcomes	CO1.Understanding the basic terminology used in computer programming. CO2. Writing, compiling and debugging programs in C language using different data types. CO3.Designingprogramsinvolveddecisionstructures, loops and functions, arrays and strings. CO4.Understandingpointersanduseofstructureandunion.				

Contents of Course		
Unit	Contents	No. of Period
I	Fundamental Of C: Programming Concepts, Pseudocode, Algorithm, Flowchart, History and importance of C, Basic Structure and Execution of C Program, Constants, Variables, and Data Types, Operators and Expressions, Operator Precedence and Associativity, Managing Input and Output Operations.	15
II	Branching & Looping: if statement, if...else statement, nesting of if else statement, else if ladder, switch statement, Go to statement. Looping: while loop, do while loop, for loop. Array and Strings: One-dimensional arrays, Declaration and Initialization, Two- dimensional arrays, Declaration and Initialization, Character arrays. String: Reading and Writing strings, String-handling functions.	15
III	Functions: Need, Elements of user-defined functions, Definition of Functions, Function call and declaration, Category of Functions, Parameter Passing, Recursion, Passing arrays to functions, Passing strings to functions. Storage Classes: Scope, visibility and Lifetime of variables.	15
IV	Understanding Pointers: Accessing the address of a variable, declaration and initialization of pointer variables, accessing a variable through its pointer, pointer arithmetic, pointer to pointer, Array through pointers. Structures and Unions: Defining structure, Declaring structure variables, Accessing structure members, Structure initialization, Operation on individual members, Array of structures, Union.	15
Total no. of Lectures		60

Reference books	1. E.Balagurusamy–Programming in ANSIC, 3 rd Edn., TMH,NewDelhi;2004. 2. Programming with C,B.S.Gottfried(TMh). 3. Y.Kanetkar–LetusC,4 th Edition, BPBPublication, NewDelhi;2002. 4. Kerighan & Richie The C programming language (PHIPublication).
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End Semester Exam (ESE)	Three Section - A, B & C Section A: Q1. Objective- 10 x 1 = 10 Mark; Section B: Long Answer type questions 1 out of 2 from each unit- 4 x 5 = 20 Marks; Section C: Descriptive answer type questions 1 out of 2 from each unit- 4 x 10 = 40 Marks;	

Program Code and Name	DPDC02-Post Graduate Diploma in Computer Application			Semester	I
Exam Code and Name	4021 - Post Graduate Diploma in Computer Application First Semester			Paper	I
Course Code	PGDCAP101			Course Type	P
Course Title	LAB PC PACKAGES & TALLY				
Total Credit	3				
Total Marks	CIA: 30	ESE: 70	Max Marks: 100	Min. Pass. Marks: 40	
Prerequisites (if any)					
Course Outcomes	CO1: Understand the fundamentals of DOS operations, Windows environment, and basic file management. CO2: Apply word processing techniques using Microsoft Word for document creation and formatting. CO3: Utilize spreadsheet tools in Microsoft Excel for data management, calculations, and graphical representation. CO4: Perform basic accounting tasks using Tally ERP 9 including company creation, voucher entry, and financial report generation.				

Contents of Course	
Important Guidelines for Project	No. of Period
<ol style="list-style-type: none"> 1. Create and save a text file using Notepad. 2. Type a leave application and format the text in Microsoft Word. 3. Create a resume using table and formatting tools in Microsoft Word. 4. Create a student marksheet and calculate total marks in Microsoft Excel. 5. Prepare a monthly expense sheet using formulas in Microsoft Excel. 6. Create a chart for student marks in Microsoft Excel. 7. Create a presentation on “Computer Fundamentals” using Microsoft PowerPoint. 8. Create a 5-slide presentation with animations and transitions in Microsoft PowerPoint. 9. Draw and color the Indian National Flag using Microsoft Paint. 10. Create a simple scenery using shapes and colors in Microsoft Paint. 11. Create a company in TallyPrime. 12. Create ledger accounts in TallyPrime. 13. Enter purchase and sales vouchers in TallyPrime. 14. Display Trial Balance in TallyPrime. 15. <input type="checkbox"/> Display Profit & Loss Account and Balance Sheet in TallyPrime. 	60

Reference books	<ol style="list-style-type: none"> 1. Comdex Computer Course Kit (Windows 7 withoffice2010), Gupta vikas, Dreamtech Publication. 2. Mastering MS-Office 2000, Professional Edition by Courter,BPB Publication. 3. MS-Office 2000 Training Guide by Maria, BPB Publication. 4. PC Software, Ravi Taxalli, BPB 5. Computer Fundamental by P.K. Sinha 6. Financial Accounting with Tally 9.001 edition by Vikas Gupta. 7. Mastering Tally... ERP9 By A.K. Nandhani.
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End Semester Exam (ESE)		

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Exam Code and Name	4021 - Post Graduate Diploma in Computer Application First Semester			Paper	II
Course Code	PGDCAP102			Course Type	P
Course Title	PROGRAMMING IN C				
Total Credit	3				
Total Marks	CIA: 30	ESE: 70	Max Marks: 100	Min. Pass. Marks: 40	
Prerequisites (if any)					
Course Outcomes	CO1: Understanding the basic terminology used in computer programming. CO2. Writing, compiling and debugging programs in C language using different data types. CO3.Designingprogramsinvolvedecisionstructures, loops and functions, arrays and strings. CO4.Understandingpointersanduseofstructureandunion				

Contents of Course	
Important Guidelines for Project	No. of Period
<ol style="list-style-type: none"> 1. Write a program to print "Hello World" using C. 2. Write a program to perform addition, subtraction, multiplication, and division of two numbers in C. 3. Write a program to find whether a number is even or odd using C. 4. Write a program to find the largest of two numbers using C. 5. Write a program to check whether a number is positive or negative using C. 6. Write a program to calculate the factorial of a number using C. 7. Write a program to generate the Fibonacci series using C. 8. Write a program to check whether a number is prime or not using C. 9. Write a program to reverse a number using C. 10. Write a program to find the sum of digits of a number using C. 11. Write a program to find the greatest among three numbers using C. 12. Write a program to display multiplication table of a number using C. 13. Write a program to sort elements of an array in ascending order using C. 14. Write a program to find the length of a string using C. 15. <input type="checkbox"/> Write a program to swap two numbers using call by value in C. 	60

Reference books	<ol style="list-style-type: none"> 1. E.Balagurusamy–Programming in ANSIC, 3rd Edn., TMH,NewDelhi;2004. 2. Programming with C,B.S.Gottfried(TMh). 3. Y.Kanetkar–LetusC,4th Edition, BPBPublication, NewDelhi;2002. Kerighan & Richie The C programming language (PHIPublication).
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